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 DESCRIPTORS Academic Achievement; Arithmetic; Cooperative Learning; Early Childhood Education; *Educational Strategies; Elementary Education; Evaluation; *Learning Disabilities; *Learning Strategies; *Mathematics Instruction; Problem Solving; *Special Education; Teaching Methods; Word Problems (Mathematics)

ABSTRACT

Recognition of the importance of (special) children's learning of mathematics in an active fashion has increased rapidly since the beginning of the 1980s. This book presents current ideas and trends in the teaching of mathematics and aims at giving an overview of new developments in the field of (special) mathematics and showing how researchers use methodological analyses to prove the results of their study. Sections are divided by topic as follows: Issues on the Organization of Pupils and Schools, Knowledge and Learning in Mental Arithmetic, Knowledge and Learning with Arithmetic Materials and Texts, and Special Children. Chapters include: (1) "Current Trends in Research on Learning and Instruction of Mathematics" (J.E.H. Van Luit); (2) "New Chances for Paper-and-Pencil Tests in Mathematics Education" (M. Van den Heuvel-Panhuizen); (3) "A Method To Diagnose Arithmetic Disabilities" (J.E.H. Van Luit); (4) "On the Initial Learning of Mathematics: Does Schooling Really Help?" (M. Frontera); (5) "Classrooms as Contexts To Learn How To Act in a Conceptual Environment: An Arithmetic Word Problem Solving Case Study" (P. Sorzio); (6) "Groups That Work: Social Factors in Elementary Students' Mathematics Problem Solving" (L.C. Wilkinson, A. Martino, & G. Camilli); (7) "A Vygotskian Approach To Research on Mental Addition and Subtraction Up To Hundred: Handy Arithmetic for Primary School Students" (M. Van der Heijden); (8) "Assessment of Flexibility in Mental Arithmetic" (T. Klein & M. Beishuizen); (9) "Clever Rearrangement Strategies in Children's Mental Arithmetic: A Confrontation of Eye-Movement Data and Verbal Protocols" (L. Verschaffel, E. De Corte, I. Gielen, & E. Struyf); (10) "Exploration of Individual Learning Processes in Mathematics" (K. Hasemann); (11) "The Use of Counting in Numerical Reasoning" (V. Bermejo & M.O. Lago); (12) "Latino, Anglo, and Korean Children's Finger Addition Methods" (K.C. Fuson, T. Perry, & Y. Kwon); (13) "A Microgenetic Longitudinal Study on the Acquisition of Word Problem Solving Skills" (E. Stern); (14) "A Cognitive Component Analysis of Arithmetic Word Problem Solving" (H. Tajika); (15) "Reading To Learn Mathematics: A Report on Primary School Children's Constructive Activity in Learning From Text" (C. Desforges & S. Bristow); (16) "Cerebral Palsied

Children's Schemes To Face Quantitative Tasks" (C. Larere); (17) "The Results of Different Treatments on Children's Weak Performance in Preparatory and Initial Arithmetic" (B.A.M. Van de Rijt & J.E.H. Van Luit); (18) "Teaching a Complex Counting Procedure To Improve Mathematical Word Problem Solving in Children with Learning Difficulties" (E.C.D.M. Van Lieshout & I. Cornelissen); (19) "Cognitive and Affective Effects of Computer-Based Arithmetic Practice on the Lowest Achieving Students" (N. Hativa); (20) "Dealing with Learning Difficulties Concerning Addition and Subtractions, Due to or Despite the Little Person" (J.E.H. Van Luit); and (21) "Mathematical Word Problem Solving of Normally Achieving and Mildly Mentally Retarded Children" (E.C.D.M. Van Lieshout, M.W.M. Jaspers, & B.H.M. Landewe). (JRH)

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